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## NOTICE OF ALLOWANCE AND FEE(S) DUE

28381 7590 07/19/2009

ARNOLD & PORTER LLP  
ATTN: IP DOCKETING DEPT.  
555 TWELFTH STREET, N.W.  
WASHINGTON, DC 20004-1206

EXAMINER

ALLEN, MARIANNE P

ART UNIT

PAPER NUMBER

1647

DATE MAILED: 07/10/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,076	08/23/2006	Wolfgang E. Berdel	20490.003	7498

TITLE OF INVENTION: FUSION POLYPEPTIDES, AND USE THEREOF IN ANTIVASCULAR TUMOR THERAPY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	10/13/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** **Mail** **Mail Stop ISSUE FEE**  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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28381 7590 07/19/2009

**ARNOLD & PORTER LLP**  
**ATTN: IP DOCKETING DEPT.**  
**555 TWELFTH STREET, N.W.**  
**WASHINGTON, DC 20004-1206**

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,076	08/23/2006	Wolfgang E. Berdel	20490.003	7498
TITLE OF INVENTION: FUSION POLYPEPTIDES, AND USE THEREOF IN ANTIVASCULAR TUMOR THERAPY				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	10/13/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
ALLEN, MARIANNE P	1647	514-012000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1  
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2  
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/569,076	08/23/2006	Wolfgang E. Berdel	20490.003	7498
28381	7590	07/19/2009	EXAMINER	
ARNOLD & PORTER LLP ATTN: IP DOCKETING DEPT. 555 TWELFTH STREET, N.W. WASHINGTON, DC 20004-1206			ALLEN, MARIANNE P	
			ART UNIT	PAPER NUMBER
			1647	
DATE MAILED: 07/10/2009				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 113 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 113 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/569,076

**Applicant(s)**

BERDEL ET AL.

**Examiner**

Marianne P. Allen

**Art Unit**

1647

**- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview held 6/24/09.
2. ☒ The allowed claim(s) is/are 42-65 herein renumbered as 1-3, 10, 12-13, 4, 14, 8, 5, 16, 15, 11, 9, 16, 6-7, 17, 19, 21, 23, 18, 20, 22, and 24, respectively.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some\* c) ☐ None of the:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 2/26/09
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

/Marianne P. Allen/  
Primary Examiner, Art Unit 1647

### EXAMINER'S AMENDMENT

An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on 30 June 2009, Dr. Kristan Lansbery requested an extension of time for 1 MONTH(S) and authorized the Director to charge Deposit Account No. 50-2387, referencing matter number 20490.003, the required fee of \$130.00 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the specification at page 9, line 5, please insert --(H)-- after the phrase "and kidney" to reference this subpart of Figure 36.

Please cancel claims 19-21, 24, 26-27, 29, 31-37, 39, and 41 without prejudice.

Please add new claims 42-65 as set forth below.

42. A fusion polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOS: 3, 4, 6, 7, and 8.

43. A fusion polypeptide consisting of an amino acid sequence selected from the group consisting of SEQ ID NOS: 3, 4, 6, 7, and 8.
44. A nucleic acid comprising a nucleotide sequence encoding the fusion polypeptide of claim 42 or 43.
45. A nucleic acid consisting of a nucleotide sequence encoding the fusion polypeptide of claim 42 or 43.
46. A nucleic acid comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 10, 11, 13, 14, and 15.
47. A nucleic acid consisting of a nucleotide sequence selected from the group consisting of SEQ ID NOS: 10, 11, 13, 14, and 15.
48. A vector comprising the nucleic acid of claim 44.
49. A vector comprising the nucleic acid of claim 46 or 47.
50. An isolated host cell comprising the nucleic acid of claim 44.
51. An isolated host cell comprising the vector of claim 48.

52. An isolated host cell comprising the vector of claim 49.

53. A composition comprising the fusion polypeptide of claim 42 or 43 and a pharmaceutically acceptable carrier, excipient, or adjuvant.

54. A composition comprising the nucleic acid of claim 44 and a pharmaceutically acceptable carrier, excipient, or adjuvant.

55. A composition comprising the nucleic acid of claim 46 and a pharmaceutically acceptable carrier, excipient, or adjuvant.

56. A composition comprising the vector of claim 51 and a pharmaceutically acceptable carrier, excipient, or adjuvant.

57. A composition comprising the host cell of claim 48 and a pharmaceutically acceptable carrier, excipient, or adjuvant.

58. A method of treating a patient with a neoplastic disease comprising administering to said patient a fusion polypeptide of SEQ ID NO: 3 or 4 in an amount effective to inhibit tumor growth.

59. A method of treating a patient with a neoplastic disease comprising administering to said patient a fusion polypeptide of SEQ ID NO: 3 or 4 in an amount effective to reduce the size of the tumors in the patient.

60. A method of treating a patient with a neoplastic disease comprising administering to said patient a composition comprising the fusion polypeptide of SEQ ID NO: 3 or 4 and a pharmaceutically acceptable carrier, excipient, or adjuvant in an amount effective to inhibit tumor growth.

61. A method of treating a patient with a neoplastic disease comprising administering to said patient a composition comprising the fusion polypeptide of SEQ ID NO: 3 or 4 and a pharmaceutically acceptable carrier, excipient, or adjuvant in an amount effective to reduce the size of the tumors in the patient.

62. The method according to claim 58, wherein said administering is selected from the group consisting of intravenous, subcutaneous, oral, and intraperitoneal administration, wherein said oral administration is of a gastrointestinal cleavage resistant formulation.

63. The method according to claim 59, wherein said administering is selected from the group consisting of intravenous, subcutaneous, oral, and intraperitoneal administration, wherein said oral administration is of a gastrointestinal cleavage resistant formulation.



64. The method according to claim 60, wherein said administering is selected from the group consisting of intravenous, subcutaneous, oral, and intraperitoneal administration, wherein said oral administration is of a gastrointestinal cleavage resistant formulation.

65. The method according to claim 61, wherein said administering is selected from the group consisting of intravenous, subcutaneous, oral, and intraperitoneal administration, wherein said oral administration is of a gastrointestinal cleavage resistant formulation.

The following is an examiner's statement of reasons for allowance:

Alignment of instant SEQ ID NO: 3 to SEQ ID NO: 4 of Wang (U.S. Patent No.

7,425,328) is set forth below:

```
US-10-816-938-4
; Sequence 4, Application US/10816938
; Patent No. 7425328
; GENERAL INFORMATION:
; APPLICANT: Wang, Baiyang
; TITLE OF INVENTION: Tissue Factor Antibodies and Uses Thereof
; FILE REFERENCE: 1861.1670002
; CURRENT APPLICATION NUMBER: US/10/816,938
; CURRENT FILING DATE: 2004-04-05
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 4
; LENGTH: 260
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-816-938-4
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Query Match          98.0%; Score 1161; DB 3; Length 260;
Best Local Similarity 99.5%; Pred. No. 1.4e-108;
Matches 220; Conservative 0; Mismatches 1; Indels 0; Gaps
0;
```

```
Qy      1 SGTNTNTVAAYNLTKWSTNFKTILEWEKPKVNVQVYTVQISTKSGDWKSKCFYTTDTECDLT 60
          |||
Db      33 SGTNTNTVAAYNLTKWSTNFKTILEWEKPKVNVQVYTVQISTKSGDWKSKCFYTTDTECDLT 92
```

```
Qy      61 DEIVKDVKQTYLARVFSYPAGNVESTGSAGEPLYENSPEFTPYLETNLGQPTIQSFEQVG
120      |
Db      93 DEIVKDVKQTYLARVFSYPAGNVESTGSAGEPLYENSPEFTPYLETNLGQPTIQSFEQVG
152      |

Qy     121 TKVNVTVEDERTLVRNNNTFLSLRDVFGKDLIYTLYYWKSSSSGKKTAKTNTNEFLIDVD
180      |
Db     153 TKVNVTVEDERTLVRNNNTFLSLRDVFGKDLIYTLYYWKSSSSGKKTAKTNTNEFLIDVD
212      |

Qy     181 KGENYCFSVQAVIPSRITVNRKSTDSPVECMGQEKGEFRGRG 221
Db     213 KGENYCFSVQAVIPSRITVNRKSTDSPVECMGQEKGEFRERG 253
```

SEQ ID NO: 4 of Wang is longer and does not exactly match amino acids 1-224 of instant SEQ ID NO: 3.

The prior art of record does not teach nor suggest the fusion polypeptides of SEQ ID NOS: 3, 4, 6, 7, and 8 and does not teach nor suggest the nucleic acid sequences of SEQ ID NOS: 10, 11, 13, 14, and 15. Based on the examples in the specification and the post-filing date art to Kessler et al. (2008) and Bieker et al. (2009), one of ordinary skill in the art would have reason to believe that SEQ ID NOS: 3 and 4 could have been used to treat a variety of neoplasms by reducing the size of tumors or by inhibiting tumor growth.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne P. Allen whose telephone number is (571)272-0712. The examiner can normally be reached on Monday-Friday, 5:30 am - 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath N. Rao can be reached on 571-272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marianne P. Allen/  
Primary Examiner, Art Unit 1647

mpa